

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re Application of: Mark Dinsmore

Serial No.: 10/718,506 (which is a reissue application of
6,320,932, issued November 20, 2001)

Filed: November 20, 2003

Title: MINIATURE RADIATION SOURCE WITH FLEXIBLE
PROBE AND LASER DRIVEN THERMIONIC EMITTER

Attorney Ref.: 56249-140 (PHLL-132DVRE)

CERTIFICATE OF MAILING (37 C.F.R. § 1.8(a))

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail under 37 CFR 1.8(a) in an envelope addressed to Mail Stop Missing Parts, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

Date:

09-02-04

Elizabeth Kim
Elizabeth Kim

Mail Stop Missing Parts
Assistant Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PETITION UNDER 37 CFR § 1.47(b)

Sir:

In response to the Notice To File Missing Parts of February 2, 2004, petition is hereby made to accept the Declaration and Power of Attorney, which is enclosed herewith and is signed by Mark G. Lappin on behalf of and as an agent of the sole inventor of the above-identified reissue application, pursuant to the provisions of 37 C.F.R. § 1.47(b). The Notice To File Missing Parts of February 2, 2004 has a two (2) month shortened statutory period for response expiring April 2, 2004, and a Petition for five (5) month extension of time to respond to the Notice to File Missing Parts, up to and including September 2, 2004, is being filed concurrently herewith.

BST99 1423186-1.056249.0140

~~09/08/2004 MBELETE1 00000065 501133 10718506~~

09/08/2004 MBELETE1 00000065 10718506

03 FC:1460 130.00 DA

A. SOLE INVENTOR

Mark Dinsmore is the sole inventor of the above-identified reissue application ("Reissue Application"). At the time Mark Dinsmore invented the subject matter of the Reissue Application ("Invention"), he was an employee of Photoelectron Corporation ("Photoelectron").

B. APPLICANT MAKES OATH

In accordance with M.P.E.P. §409.03(b), the undersigned, Mark G. Lappin, hereby makes application for the Invention on behalf of and as agent for an inventor who refuses to sign the Declaration and Power of Attorney for the Reissue Application ("Application Papers"). Mark G. Lappin hereby states that he is authorized to sign on behalf of Carl Zeiss AG, the current assignee of the Reissue Application, in this matter for this purpose.

C. APPLICANT'S RELATIONSHIP TO INVENTOR

In accordance with M.P.E.P. § 409.03(b), applicant Mark G. Lappin is a registered patent attorney (Registration No. 26,618) in the Intellectual Property Department of McDermott Will & Emery LLP, acting on behalf of Carl Zeiss AG, who acquired the Reissue Application from Photoelectron. Photoelectron is the original assignee of Mark Dinsmore's interest in the Reissue Application.

D. INVENTOR REFUSED TO SIGN THE APPLICATION PAPERS

In accordance with M.P.E.P. §409.03(d), 1) Mark Dinsmore refused to sign the Application Papers, despite having been asked to do so; and 2) Mark Dinsmore gave a

reason for refusing to sign the Application Papers, namely that he was concerned that signing the Application Papers might limit his future business activities.

E. PROOF OF REFUSAL TO EXECUTE THE APPLICATION PAPERS

In accordance with M.P.E.P. §409.03(d), Mark G. Lappin submits herewith a "Declaration in Support of a Petition Under 37 C.F.R. § 1.47(b)," which fully describes the facts that are relied upon to establish that Mark Dinsmore refused to sign the Application Papers.

F. LAST KNOWN ADDRESS

In accordance with M.P.E.P. §409.03(e), the last known address of Mark Dinsmore is: 85 Horse Pond Road, Sudbury, MA 01776.

G. THE INVENTOR HAS ASSIGNED THE INVENTION TO CARL ZEISS AG

In accordance with M.P.E.P. §409.03(f), the inventor Mark Dinsmore assigned the Reissue Application to Photoelectron, which in turn assigned the Reissue Application to Carl Zeiss AG. A copy of the relevant assignment documents ("Assignment Documents") are attached to this petition. The Assignment Documents establish a prima facie case that Carl Zeiss AG has a proprietary interest in the subject matter of the Reissue Application.

H. FILING OF THE APPLICATION IS NECESSARY TO PRESERVE THE RIGHTS OF CARL ZEISS AG

In accordance with M.P.E.P. §409.03(g), the refusal by Mark Dinsmore to sign the Application Papers fails to preserve Carl Zeiss AG's rights granted under the

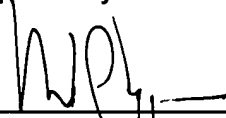
Assignment Documents, and will result in irreparable damage by causing the abandonment of the Reissue Application for failure to comply with the statutory requirements of 37 C.F.R. §1.497. The filing of the Reissue Application is necessary to preserve the rights of Carl Zeiss AG.

I. PETITION FEE

The Commissioner is hereby authorized to charge the petition fee in accordance with 37 C.F.R. 1.117(i), as well as the petition fee for an extension of time under 37 C.F.R. § 1.136, to Deposit Account 50-1133. The Commissioner is hereby authorized to charge any additional fees that may be due, or credit any overpayment of same, to Deposit Account No. 50-1133.

Date: September 2, 2004

Respectfully submitted,



Mark G. Lappin
Registration Number 26,618
McDERMOTT WILL & EMERY LLP
28 State Street
Boston, Massachusetts 02109
Tel. (617) 535-4043
Fax: (617) 535-3800



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Mark Dinsmore

Serial No.: 10/718,506 (which is a reissue application of
6,320,932, issued November 20, 2001)

Filed: November 20, 2003

Title: MINIATURE RADIATION SOURCE WITH FLEXIBLE
PROBE AND LASER DRIVEN THERMIONIC EMITTER

Attorney Ref.: 56249-140 (PHLL-132DVRE)

Mail Stop Missing Parts
Assistant Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

CERTIFICATE OF MAILING (37 C.F.R. § 1.8(a))

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail under 37 CFR 1.8(a) in an envelope addressed to Mail Stop Missing Parts, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

Date: 09-02-04

Elizabeth Kim
Elizabeth Kim

**DECLARATION OF MARK G. LAPPIN FILED
IN SUPPORT OF PETITION UNDER 37 C.F.R. § 1.47(b)**

I, Mark G. Lappin, to the best of my knowledge and belief, do hereby state as follows:

1. I am a registered patent attorney (Registration No. 26,618) in the Intellectual Property Department of McDermott Will & Emery LLP, acting on behalf of Carl Zeiss AG, who is the current assignee of the above-referenced reissue application ("Reissue Application").

2. Mark Dinsmore is the sole inventor of the Reissue Application.

3. Mark Dinsmore is the sole inventor of U.S. Patent No. 6,320,932B2 ("Underlying Patent"), upon which the Reissue Application is based. The Underlying Patent, in turn, issued from a divisional application based on U.S. Patent No. 6,195,411 ("Parent Patent").

4. Mark Dinsmore is the sole inventor of the Parent Patent.

5. I filed and prosecuted the divisional application that issued in due course as the Underlying Patent ("Underlying Application"). I filed and prosecuted the application that issued in due course as the Parent Patent ("Parent Application").

6. Because Mark Dinsmore 1) is the sole inventor of the Underlying Patent and the Parent Patent, 2) has reviewed the contents of the Underlying Application and the Parent Application, and 3) has signed the application papers for the Underlying Application and the Parent Application, Mark Dinsmore is thoroughly familiar with the subject matter disclosed in the Reissue Application.

7. On or about August 31, 2004, I spoke with Mark Dinsmore, explaining to him the proposed changes in the claims of the Reissue Application, as compared to the claims of the Underlying Patent.

8. The Reissue Application was offered to Mark Dinsmore, and Mark Dinsmore's signature of the Declaration and Power of Attorney for the Reissue Application ("Application Papers") was solicited.

8. Mark Dinsmore expressly stated that he would not sign the Application Papers, thereby effecting a refusal to sign the Application Papers. Mark Dinsmore's express oral refusal to sign occurred on August 31, 2004, in Massachusetts.

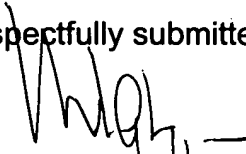
9. Mark Dinsmore stated a reason for his refusal, namely that he was

September 2, 2004
U.S.S.N. 10/718,506
Page 2

concerned that signing the Application Papers would limit his future business activities.

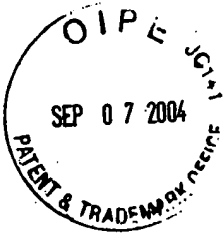
10. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of any application or patent issued thereon.

Respectfully submitted,



Date: September 2, 2004

Mark G. Lappin
Registration Number 26,618
McDERMOTT WILL & EMERY LLP
28 State Street
Boston, Massachusetts 02109
Tel. (617) 535-4043
Fax: (617) 535-3800

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Mark Dinsmore

Serial No.: 10/718,506 (which is a reissue application of
6,320,932, issued November 20, 2001)

Filed: November 20, 2003

Title: MINIATURE RADIATION SOURCE WITH FLEXIBLE
PROBE AND LASER DRIVEN THERMIONIC EMITTER

Attorney Ref.: 56249-140 (PHLL-132DVRE)

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Date: 09-02-04
~~Gayle Endres~~ Elizabeth Endres

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

ASSENT OF ASSIGNEE TO REISSUE

Sir:

The undersigned **Carl Zeiss AG**, with a post address **Carl Zeiss Strass 22, 73447 Oberkochen, Germany**, assignee of the entire interest in the above-mentioned Letters Patent, hereby assents to the accompanying reissue patent application. Attached is a "Statement Under 37 CFR 3.73(b)," establishing the right of the assignee, **Carl Zeiss AG**, to take action in this reissue application. The undersigned is empowered to sign this certificate on behalf of the assignee.

Respectfully submitted,

CARL ZEISS AGDate: September 1, 2004By: i.v. Nikolaus Gauss iv. Werner Hueller-RisuaanPrinted Name: Dr. Nikolaus Gauss Dr. Werner Hueller-Title: authorized clerk authorized clerk

**Statement Under 37 CFR 3.73(b)**

Applicant/Patent Owner: Mark Dinsmore / Carl Zeiss AG

Application No./Patent No.: 10/718,506 Filed: November 20, 2003
(which is a reissue of 6,320,932) Issued: November 20, 2001

Entitled: MINIATURE RADIATION SOURCE WITH FLEXIBLE PROBE AND LASER
DRIVEN THERMIONIC EMITTER

Carl Zeiss AG*(Name of Assignee)**(Type of Assignee)*

certifies that it is the assignee of the entire right, title and interest in the patent application identified above by virtue of either:

A. ☒ An assignment from the inventor(s) of the patent application identified above. The assignment was recorded in the Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

OR

B. ☐ A chain of title from the inventor(s), of the patent application identified above, to the current assignee as shown below:

1. From: _____ To: _____

The document was recorded in the Patent and Trademark Office at

Reel _____ Frame _____, or for which thereof is attached.

2. From: _____ To: _____

The document was recorded in the Patent and Trademark Office at

Reel _____ Frame _____, or for which thereof attached.

3. From: _____ To: _____

The document was recorded in the Patent ademark Office at

Reel _____ Frame _____, or for whi thereof is attad.

☐ Additional documents in the chain of title are listed on at.

☐ Copies of assignments or other documents in the chain of title are attached.

The undersigned has reviewed all the documents in the chain of title of the patent application identified above and, to the best of undersigned's knowledge and belief, title is in the assignee identified above.

The undersigned (whose title is supplied below) is empowered to sign this certificate on behalf of the assignee.

BST99 1382694-1.056249.0140

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: September 1, 2004

Name: Dr. H. Gauss Dr. Müller-Ripmann

Title: authorized clerk authorized clerk

Telephone Number: +49 7364 20 2841

Signature:

i.v. Nikolaus Gauss i.v. Müller-Ripmann



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Mark Dinsmore

Serial No.: 10/718,506 (which is a reissue application of
6,320,932, issued November 20, 2001)

Filed: November 20, 2003

Title: MINIATURE RADIATION SOURCE WITH FLEXIBLE PROBE
AND LASER DRIVEN THERMIONIC EMITTER


Attorney Ref.: 56249-140 (PHLL-132DVRE)

Mail Stop Missing Parts
Assistant Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

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Date: 09-02-04


Elizabeth Kim

**STATEMENT EXPLAINING
CHANGE IN NAME OF ASSIGNEE**

I, Mark G. Lappin, to the best of my knowledge and belief, do hereby state as follows:

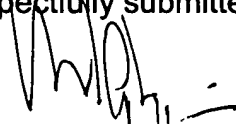
1. I am a registered patent attorney (Registration No. 26,618) in the Intellectual Property Department of McDermott, Will & Emery, acting on behalf of Carl Zeiss AG.

2. The current assignee of the above-referenced reissue application ("Reissue Application"), as shown in assignment document ("Assignment Document") recorded in the United States Patent and Trademark Office at Reel 014981, Frame 0591, is "Carl-Zeiss-Stiftung Doing Business as Carl Zeiss."

3. On July 1, 2004, "Carl-Zeiss-Stiftung Doing Business as Carl Zeiss" changed its legal status to a German stock corporation and concurrently changed its name to "Carl Zeiss AG." Documents showing the name change will be submitted shortly hereafter.

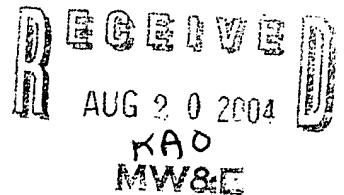
4. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of any application or patent issued thereon.

Respectfully submitted,



Date: September 2, 2004

Mark G. Lappin
Registration Number 26,618
McDERMOTT, WILL & EMERY LLP
28 State Street
Boston, Massachusetts 02109
Tel.: (617) 535-4043
Fax: (617) 535-3800



UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

AUGUST 14, 2004

PTAS



102673220A

MARK G. LAPPIN, P.C.
28 STATE STREET
BOSTON, MA 02109

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 02/17/2004

REEL/FRAME: 014981/0591
NUMBER OF PAGES: 44

BRIEF: ASSET PURCHASE AGREEMENT
DOCKET NUMBER: PHILL-011

ASSIGNOR:
PHOTOELECTRON CORPORATION

DOC DATE: 06/04/2003

ASSIGNEE:
CARL-ZEISS-STIFTUNG DOING BUSINESS
AS CARL ZEISS
CARL ZEISS STRASSE 22
OBERKOCHEN, FED REP GERMANY 73447

SERIAL NUMBER: 10718506
PATENT NUMBER:

FILING DATE: 11/20/2003
ISSUE DATE:

TITLE: MINIATURE RADIATION SOURCE WITH FLEXIBLE PROBE AND LASER DRIVEN
THERMIONIC EMITTER

PHLL-154
SERIAL NUMBER: 10005290 56249 098 FILING DATE: 12/04/2001
PATENT NUMBER: ISSUE DATE:
TITLE: THERAPEUTIC RADIATION SOURCE WITH IN SITU RADIATION DETECTING SYSTEM

PHLL-159
SERIAL NUMBER: 10005289 FILING DATE: 12/04/2001
PATENT NUMBER: 6721392 56249 103 ISSUE DATE: 04/13/2004
TITLE: OPTICALLY DRIVEN THERAPEUTIC RADIATION SOURCE INCLUDING A NON-PLANAR TARGET CONFIGURATION

PHLL-162
SERIAL NUMBER: 10133048 FILING DATE: 04/26/2002
PATENT NUMBER: 6728335 56249 147 ISSUE DATE: 04/27/2004
TITLE: CONTROLLER FOR ARRAY OF MINIATURE RADIATION SOURCES

PHLL-163
SERIAL NUMBER: 10133079 FILING DATE: 04/26/2002
PATENT NUMBER: 56249 148 ISSUE DATE:
TITLE: METHOD OF TREATING A TUMOR BY PRE-IRRADIATION

PHLL-17045
SERIAL NUMBER: 10481392 FILING DATE:
PATENT NUMBER: 56249 164 ISSUE DATE:
TITLE: X-RAY SOURCE FOR MATERIALS ANALYSIS SYSTEM

PHLL-176PR
SERIAL NUMBER: 60440454 FILING DATE: 01/16/2003
PATENT NUMBER: 56249 152 ISSUE DATE:
TITLE: X-RAY SOURCE HAVING A THERMALLY MODULATED FIELD EMISSION CATHODE

PHLL-177PR
SERIAL NUMBER: 60440483 FILING DATE: 01/16/2003
PATENT NUMBER: 56249 153 ISSUE DATE:
TITLE: BEAM CURRENT MEASUREMENT TECHNIQUE

PHLL-110
SERIAL NUMBER: 07577883 FILING DATE: 09/05/1990
PATENT NUMBER: 5153900 56249 012 ISSUE DATE: 10/06/1992
TITLE: MINIATURIZED LOW POWER X-RAY SOURCE

PHLL-111
SERIAL NUMBER: 07955494 FILING DATE: 10/02/1992
PATENT NUMBER: 5369679 56249 019 ISSUE DATE: 11/29/1994
TITLE: LOW POWER X-RAY SOURCE WITH IMPLANTABLE PROBE FOR TREATMENT OF BRAIN TUMORS
PHLL-111CP

SERIAL NUMBER: 08184271 56249 020 FILING DATE: 01/21/1994
PATENT NUMBER: 5422926 ISSUE DATE: 06/06/1995
TITLE: X-RAY SOURCE WITH SHAPED RADIATION PATTERN

PHLL-111CP3
SERIAL NUMBER: 08184021 FILING DATE: 01/21/1994
PATENT NUMBER: 5442678 56249 021 ISSUE DATE: 08/15/1995
TITLE: X-RAY SOURCE WITH IMPROVED BEAM STEERING

PHLL-117
SERIAL NUMBER: 08104338 FILING DATE: 08/09/1993
PATENT NUMBER: 5452720 56249 026 ISSUE DATE: 09/26/1995
TITLE: METHOD FOR TREATING BRAIN TUMORS

PHLL-117CP
SERIAL NUMBER: 08284841 FILING DATE: 08/05/1994
PATENT NUMBER: 5528652 56249 027 ISSUE DATE: 06/18/1996
TITLE: METHOD FOR TREATING BRAIN TUMORS

PHLL-118A
SERIAL NUMBER: 08286757 56249-029 FILING DATE: 08/05/1994
PATENT NUMBER: 5511107 ISSUE DATE: 04/23/1996
TITLE: X-RAY PHANTOM APPARATUS

PHLL-118B
SERIAL NUMBER: 08286285 FILING DATE: 08/05/1994
PATENT NUMBER: 5623139 56249-034 ISSUE DATE: 04/22/1997
TITLE: A CCD X-RAY MICRODENSITOMETER SYSTEM

PHLL-119
SERIAL NUMBER: 08542066 FILING DATE: 10/12/1995
PATENT NUMBER: 5635709 56249-040 ISSUE DATE: 06/03/1997
TITLE: METHOD AND APPARATUS FOR MEASURING RADIATION DOSE DISTRIBUTION

PHLL-120
SERIAL NUMBER: 08184296 FILING DATE: 01/21/1994
PATENT NUMBER: 5428658 56249-048 ISSUE DATE: 06/27/1995
TITLE: X-RAY SOURCE WITH FLEXIBLE PROBE

PHLL-124
SERIAL NUMBER: 08273963 FILING DATE: 07/12/1994
PATENT NUMBER: 5566221 56249-061 ISSUE DATE: 10/15/1996
TITLE: APPARATUS FOR APPLYING A PREDETERMINED X-RADIATION FLUX TO AN INTERIOR SURFACE OF A BODY CAVITY

PHLL-124ACN
SERIAL NUMBER: 08507845 FILING DATE: 07/27/1995
PATENT NUMBER: 5621780 56249-062 ISSUE DATE: 04/15/1997
TITLE: X-RAY APPARATUS FOR APPLYING A PREDETERMINED FLUX TO AN INTERIOR SURFACE OF A BODY CAVITY

PHLL-124B2
SERIAL NUMBER: 08725732 FILING DATE: 10/04/1996
PATENT NUMBER: 5748699 56249-064 ISSUE DATE: 05/05/1998
TITLE: APPARATUS FOR APPLYING X-RAYS TO AN INTERIOR SURFACE OF A BODY CAVITY

PHLL-129
SERIAL NUMBER: 09502759 FILING DATE: 02/11/2000
PATENT NUMBER: 6421416 56249-085 ISSUE DATE: 07/16/2002
TITLE: APPARATUS FOR LOCAL RADIATION THERAPY

PHLL-130
SERIAL NUMBER: 09502473 FILING DATE: 02/11/2000
PATENT NUMBER: 6302581 56249-086 ISSUE DATE: 10/16/2001
TITLE: SUPPORT SYSTEM FOR A RADIATION TREATMENT APPARATUS

PHLL-132
SERIAL NUMBER: 09311792 FILING DATE: 05/13/1999
PATENT NUMBER: 6195411 56249-071 ISSUE DATE: 02/27/2001
TITLE: MINIATURE X-RAY SOURCE WITH FLEXIBLE PROBE

PHLL-132DV
SERIAL NUMBER: 09748590 FILING DATE: 12/22/2000
PATENT NUMBER: 6320932 56249-110 ISSUE DATE: 11/20/2001
TITLE: MINIATURE RADIATION SOURCE WITH FLEXIBLE PROBE AND LASER DRIVEN THERMIONIC EMITTER

PHLL-134
SERIAL NUMBER: 09505413 56249-087 FILING DATE: 02/11/2000
PATENT NUMBER: 6285735 ISSUE DATE: 09/04/2001
TITLE: APPARATUS FOR LOCAL RADIATION THERAPY

PHLL-135

SERIAL NUMBER: 09502273
PATENT NUMBER: 6301328
TITLE: APPARATUS FOR LOCAL RADIATION THERAPY

FILING DATE: 02/11/2000
ISSUE DATE: 10/09/2001

SERIAL NUMBER: 09208964
PATENT NUMBER: 6245047
TITLE: X-RAY PROBE SHEATH APPARATUS

FILING DATE: 12/10/1998
ISSUE DATE: 06/12/2001

SERIAL NUMBER: 09780823
PATENT NUMBER: 6480567
TITLE: X-RAY PROBE SHEATH APPARATUS

FILING DATE: 02/09/2001
ISSUE DATE: 11/12/2002

SERIAL NUMBER: 09210045
PATENT NUMBER: 6181770
TITLE: X-RAY SOURCE INTERLOCK APPARATUS

FILING DATE: 12/11/1998
ISSUE DATE: 01/30/2001

SERIAL NUMBER: 09211144
PATENT NUMBER: 6111932
TITLE: ELECTRON BEAM MULTISTAGE ACCELERATOR

FILING DATE: 12/14/1998
ISSUE DATE: 08/29/2000

SERIAL NUMBER: 09526245
PATENT NUMBER: 6198804
TITLE: ELECTRON BEAM MULTISTAGE ACCELERATOR

FILING DATE: 03/15/2000
ISSUE DATE: 03/06/2001

SERIAL NUMBER: 09884561
PATENT NUMBER: 6480568
TITLE: OPTICALLY DRIVEN THERAPEUTIC RADIATION SOURCE

FILING DATE: 06/19/2001
ISSUE DATE: 11/12/2002

SERIAL NUMBER: 09884229
PATENT NUMBER: 6493419
TITLE: OPTICALLY DRIVEN THERAPEUTIC RADIATION SOURCE HAVING A SPIRAL-SHAPED THERMIONIC CATHODE

FILING DATE: 06/19/2001
ISSUE DATE: 12/10/2002

SERIAL NUMBER: 10175164
PATENT NUMBER: 6658086
TITLE: OPTICALLY DRIVEN THERAPEUTIC RADIATION SOURCE WITH VOLTAGE GRADIENT CONTROL

FILING DATE: 06/19/2002
ISSUE DATE: 12/02/2003

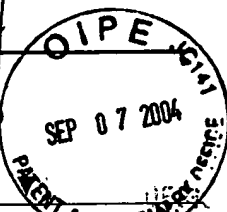
SERIAL NUMBER: 10133103
PATENT NUMBER: 6556651
TITLE: ARRAY OF MINIATURE RADIATION SOURCES

FILING DATE: 04/26/2002
ISSUE DATE: 04/29/2003

SERIAL NUMBER: 10005287
PATENT NUMBER: 6480573
TITLE: THERAPEUTIC RADIATION SOURCE WITH INCREASED CATHODE EFFICIENCY

FILING DATE: 12/04/2001
ISSUE DATE: 11/12/2002

Tab settings → → →



02-19-2004



102673220

Docket No.: PHLL-011 (56249-000)

HEET

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

To the Director of the United States Patent and Trademark Office: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies): Photoelectron Corporation

FINANCE SECTION

Additional names(s) of conveying party(ies)

☐ Yes ☒ No

3. Nature of conveyance:

Assignment

☐ Merger

☐ Security Agreement

☐ Change of Name

☒ Other Asset Purchase Agreement

Execution Date: June 4, 2003

2. Name and address of receiving party(ies):

Name: Carl-Zeiss-Stiftung doing business as Carl Zeiss

Address: Carl Zeiss Strasse 22

City: Oberkochen

State/Prov.: _____

Country: Germany

ZIP: 73447

Additional name(s) & address(es)

☐ Yes ☐ No

4. Application number(s) or patent numbers(s):

If this document is being filed together with a new application, the execution date of the application is: _____

Patent Application No.

Filing date

B. Patent No.(s)

10/718,506

11/20/2003

5,153,900

5,452,720

5,635,709

10/005,290

12/4/2001

5,369,679

5,528,652

5,428,658

10/005,289

12/4/2001

5,422,926

5,511,107

5,566,221

10/133,048

4/26/2002

5,442,678

5,623,139

5,621,780

Additional numbers

☒ Yes ☐ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Mark G. Lappin, P.C.

Registration No. 26,618

Address: 28 State Street

City: Boston

State/Prov.: MA

Country: U.S.A.

ZIP: 02109

6. Total number of applications and patents involved:

37

7. Total fee (37 CFR 3.41):.....\$ 1,480.00

☒ Enclosed - Any excess or insufficiency should be credited or debited to deposit account

☐ Authorized to be charged to deposit account

8. Deposit account number:

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Mark G. Lappin, P.C.

Name of Person Signing

Signature

2/11/04
Date

Total number of pages including cover sheet, attachments, and



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Docket No.: PHLL-011 (56249-000)

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PUBLIC RECORDS

To the Director of the United States Patent and Trademark Office: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Photoelectron Corporation

FINANCE SECTION

Additional names(s) of conveying party(ies)

☐ Yes ☒ No

3. Nature of conveyance:

Assignment

☐ Merger

☐ Security Agreement

☐ Change of Name

☒ Other Asset Purchase Agreement

Execution Date: June 4, 2003

2. Name and address of receiving party(ies):

Name: Carl-Zeiss-Stiftung doing business as Carl Zeiss

Address: Carl Zeiss Strasse 22

City: Oberkochen State/Prov.: _____

Country: Germany ZIP: 73447

Additional name(s) & address(es) ☐ Yes ☐ No

4. Application number(s) or patent numbers(s):

If this document is being filed together with a new application, the execution date of the application is: _____

Patent Application No.

Filing date

B. Patent No.(s)

10/133,079

4/26/2002

10/481,392

12/19/2003

60/440,454

1/16/2003

60/440,483

1/16/2003

5,748,699

6,320,932

6,480,567

6,421,416

6,285,735

6,181,770

6,302,581

6,301,328

6,111,932

6,195,411

6,245,047

6,198,804

Additional numbers

☒ Yes ☐ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Mark G. Lappin, P.C.

Registration No. 26,618

Address: 28 State Street

City: Boston State/Prov.: MA

Country: U.S.A. ZIP: 02109

6. Total number of applications and patents involved:

37

7. Total fee (37 CFR 3.41):.....\$ 1,480.00

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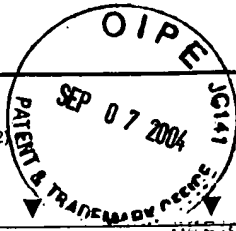
Mark G. Lappin, P.C.

Name of Person Signing

Signature

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Date

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Docket No.: PHLL-011 (56249-000)

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1. Name of conveying party(ies): 2004 FEB 17 AM 11:03
Photoelectron Corporation

FINANCE SECTION

Additional names(s) of conveying party(ies)

☐ Yes ☒ No

3. Nature of conveyance:

Assignment

☐ Merger

☐ Security Agreement

☐ Change of Name

☒ Other Asset Purchase Agreement

Execution Date: June 4, 2003

2. Name and address of receiving party(ies):

Name: Carl-Zeiss-Stiftung doing business as Carl Zeiss

Address: Carl Zeiss Strasse 22

City: Oberkochen State/Prov.: _____

Country: Germany ZIP: 73447

Additional name(s) & address(es)

☐ Yes ☐ No

4. Application number(s) or patent numbers(s):

If this document is being filed together with a new application, the execution date of the application is: _____

Patent Application No.

Filing date

B. Patent No.(s)

6,480,568

6,480,573

6,493,419

6,658,086

6,556,651

Additional numbers

☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Mark G. Lappin, P.C.

Registration No. 26,618

Address: 28 State Street

City: Boston State/Prov.: MA

Country: U.S.A. ZIP: 02109

6. Total number of applications and patents involved: 37

7. Total fee (37 CFR 3.41):.....\$ 1,480.00

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8. Deposit account number:

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Mark G. Lappin, P.C.

Name of Person Signing

[Signature]
Signature

2/11/04
Date

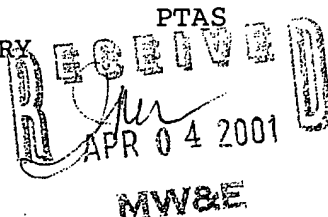
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UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

MARCH 30, 2001

MCDERMOTT, WILL & EMERY
MARK G. LAPPIN
28 STATE STREET
BOSTON MA 02109



101591129A

244-71

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NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 01/05/2001

REEL/FRAME: 011438/0583
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
DINSMORE, MARK

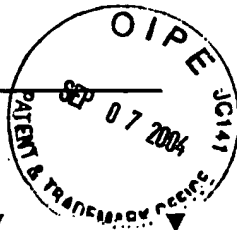
DOC DATE: 01/02/2001

ASSIGNEE:
PHOTOELECTRON CORPORATION
5 FORBES ROAD-SUITE 2
LEXINGTON, MASSACHUSETTS 02421

SERIAL NUMBER: 09311792
PATENT NUMBER: 6195411

FILING DATE: 05/13/1999
ISSUE DATE: 02/27/2001

SONYA JOHNSON, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS



01-23-2001



101591129

Packet No.: PHLL-132

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

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To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):
Mark Dinsmore

1.5.01

Additional names(s) of conveying party(ies) ☐ Yes ☒ No

3. Nature of conveyance:

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other _____

Execution Date: **January 2, 2001**

2. Name and address of receiving party(ies):

Name: **Photoelectron Corporation**

Internal Address: _____

Street Address: **5 Forbes Road - Suite 2**

City: **Lexington** State: **MA** ZIP: **02421**

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or registration numbers(s):

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No.(s)

09/311,792

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: **Mark G. Lappin**

Internal Address: **McDermott, Will & Emery**

Street Address: **28 State Street**

City: **Boston** State: **MA** ZIP: **02109**

6. Total number of applications and patents involved: **1**

7. Total fee (37 CFR 3.41):.....\$ **40.00**

- ☒ Enclosed - Any excess or insufficiency should be credited or debited to deposit account
☐ Authorized to be charged to deposit account

8. Deposit account number:

50-1133

01/19/2001 DNGUYEN 00000096 09311792

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9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Mark G. Lappin

Name of Person Signing

Signature

January 2, 2001

Date

Total number of pages including cover sheet, attachments, and document: **3**

DOCKET NO. PHLL-132

ASSIGNMENT OF PATENT RIGHTS

I, Mark Dinsmore, of 85 Horse Pond Road, Sudbury, Massachusetts 01776 in consideration of One Dollar and other valuable consideration paid to me by

Photoelectron Corporation

a corporation of Massachusetts, having its principal place of business at 5 Forbes Road, Suite 2, Lexington, Massachusetts 02421-7305, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

Photoelectron Corporation

its successors and assigns, my entire interest for the United States of America and all foreign countries including all rights of priority under the International Convention for the Protection of Industrial Property in a certain invention or improvement in

MINIATURE X-RAY SOURCE WITH FLEXIBLE PROBE

described in an application for Letters Patent of the United States, Serial Number 09/311,792, filed on May 13, 1999, and in all Letters Patent of the United States and all foreign countries which may or shall be granted on said invention, or any parts thereof, or on said application, or any divisional, continuing, reissue or other applications based in whole or in part thereon. And I agree, for myself and my executors and administrators, with said corporation and its successors and assigns but at its or their expense and charges, hereafter to execute all applications, amended specifications, deed or other instrument, and to do all acts necessary or proper to secure the grant of Letters Patent in the United States and in all other countries to said corporation, with specifications and claims in such form as shall be approved by the counsel of said corporation and to vest and confirm in said corporation, its successors and assigns, the legal title to all such patents.

And I do hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said corporation, its successors and assigns.

WITNESS my hand and seal this 2nd day of January, ~~2000~~ 2001 MD

By: [Signature]
Mark Dinsmore

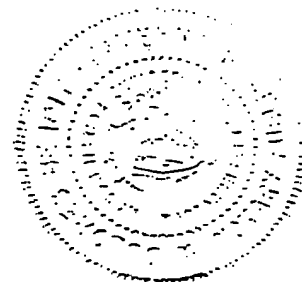
State of Massachusetts)
)ss
County of Middlesex)

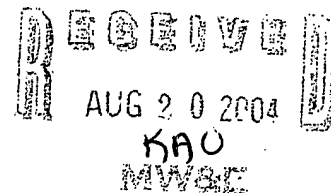
Then personally appeared the above named Mark Dinsmore and acknowledged the foregoing ~~DBT~~
instrument to be his free act and deed, before me, this day of Jan. 2nd, ~~2000~~ 2001

[Signature]
Notary Public

My commission expires:

Dolores Benoit-Taverna
NOTARY PUBLIC
My commission expires May 14, 2004.





UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

AUGUST 14, 2004

PTAS



102673220A

MARK G. LAPPIN, P.C.
28 STATE STREET
BOSTON, MA 02109

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RECORDATION DATE: 02/17/2004

REEL/FRAME: 014981/0591
NUMBER OF PAGES: 44

BRIEF: ASSET PURCHASE AGREEMENT
DOCKET NUMBER: PHILL-011

ASSIGNOR:
PHOTOELECTRON CORPORATION

DOC DATE: 06/04/2003

ASSIGNEE:
CARL-ZEISS-STIFTUNG DOING BUSINESS
AS CARL ZEISS
CARL ZEISS STRASSE 22
OBERKOCHEN, FED REP GERMANY 73447

SERIAL NUMBER: 10718506
PATENT NUMBER:

PHILL-132DVRE
56249140

FILING DATE: 11/20/2003
ISSUE DATE:

TITLE: MINIATURE RADIATION SOURCE WITH FLEXIBLE PROBE AND LASER DRIVEN
THERMIONIC EMITTER